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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/691,588	10/24/2003	Seog-soon Back	249/417	7314

7590 11/18/2004  
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EXAMINER

DO, AN H

ART UNIT PAPER NUMBER

2853

DATE MAILED: 11/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/691,588

Applicant(s)

BAEK ET AL.

Examiner

An H. Do

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 August 2004.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 11-14 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-4 and 11-14 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 26 August 2004.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

The Amendment filed on 26 August 2004 has been acknowledged.

#### ***Information Disclosure Statement***

1. The information disclosure statement (IDS) submitted on 26 August 2004 was filed and is being considered by the examiner.

#### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-4 and 11-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Maeng et al (US 6,561,625).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Regarding claim 1, Maeng et al disclose in Figures 8A-8D and 9 an ink-jet printhead (ink ejector 200), comprising: a substrate (210) on which an ink chamber

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(214) to be supplied with ink to be ejected is formed on a front surface (top surface) of the substrate (210), a manifold (212) for supplying ink to the ink chamber (214) on a rear surface (bottom surface) of the substrate (210), and an ink passage (ink channel 216) in communication with the ink chamber (214) and the manifold (212) is formed parallel (Figures 8D and 9) to the front surface (top surface) of the substrate (210); a nozzle plate (220) formed on the front surface (top surface) of the substrate (210); a nozzle (222) formed through the nozzle plate (220) at a position corresponding to a central part (Figure 8B) of the ink chamber (214); a heater (230) formed on the nozzle plate (220); and an electrode (250) electrically connected to the heater (230) for applying current to the heater (column 7, lines 53-54);

Regarding claim 2, wherein the ink chamber (214), the manifold (212), and the ink passage (ink channel 216) are formed by an etch method (Figures 20-23, column 12, lines 27-47).

Regarding claim 3, the ink passage (ink channel 216) is formed on a same plane (same top surface of substrate 210) as the ink chamber (214).

Regarding claim 4, further comprises an ink channel (216) in communication with the ink chamber (214) (Figure 8D); and a feed hole (opening shown further right of Figure 8D) in communication with the ink channel (216) and the manifold (212).

Regarding claims 11 and 12, wherein ink flowing through the ink passage (ink channel 216) in a direction parallel (Figures 8D and 9) to the front surface (top surface) of the substrate (210).

Regarding claim 13, wherein the ink channel (216) has a substantially rectangular shape (Figure 9).

Regarding claim 14, wherein the ink chamber (214) is substantially tombstone-shaped (here tombstone can be any shape, and Figure 8D showing ink chamber 214 having a hemispherical shape).

#### ***Response to Arguments***

4. Applicant's arguments, see applicant's Remarks, filed 26 August 2004, with respect to the rejection(s) of claim(s) 1-4 under pages 4-7 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Maeng et al (US 6,561,625). Maeng et al teach the limitations as in claimed invention.

***Contact Information***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to An H. Do whose telephone number is 571-272-2143. The examiner can normally be reached on Monday-Friday (Flexible).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen D. Meier can be reached on 571-272-2149. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



AD  
November 10, 2004



Stephen D. Meier  
Primary Examiner